

RECREATIONAL INTERPRETATIONS  
Emmons County, North Dakota

The soils of the survey area are rated in the following tables according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in this table can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas.

The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

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Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

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(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
3: REGAN-----	Severe: flooding wetness	Severe: wetness	Severe: flooding wetness	Severe: wetness	Severe: flooding wetness
6B: NIOBELL-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
8: HEIL-----	Severe: percs slowly ponding	Severe: excess sodium ponding	Severe: percs slowly ponding	Severe: ponding	Severe: excess sodium ponding
9: TONKA-----	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding
10: PARNELL-----	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding
11: STRAW-----	Severe: flooding	Moderate: flooding	Slight	Moderate: flooding	Severe: flooding
CHANNELED-----	---	---	---	---	---
12: NECHE VARIANT---	Severe: flooding wetness	Severe: wetness	Severe: flooding wetness	Severe: wetness	Severe: flooding wetness
13: ARNEGARD-----	Slight	Slight	Moderate: slope	Slight	Slight
13B: ARNEGARD-----	Slight	Slight	Moderate: slope	Slight	Slight
15D: CABBA-----	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Slight	Severe: depth to rock
AMOR-----	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: area reclaim slope thin layer
15E: CABBA-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock
AMOR-----	Severe: slope	Severe: slope	Severe: slope	Moderate: slope	Severe: slope
17: STADY-----	Slight	Slight	Moderate: slope	Slight	Slight
LEHR-----	Slight	Slight	Moderate: slope	Slight	Moderate: droughty

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Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
17B: STADY-----	Slight	Slight	Moderate: slope	Slight	Slight
LEHR-----	Slight	Slight	Moderate: slope	Slight	Moderate: droughty
17C: STADY-----	Slight	Slight	Severe: slope	Slight	Slight
LEHR-----	Slight	Slight	Severe: slope	Slight	Moderate: droughty
18B: REEDER-----	Slight	Slight	Moderate: area reclaim slope thin layer	Slight	Moderate: area reclaim thin layer
RHOADES-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
18C: REEDER-----	Slight	Slight	Severe: slope	Slight	Moderate: area reclaim thin layer
RHOADES-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium slope	Slight	Severe: excess sodium
19: STRAW-----	Severe: flooding	Slight	Moderate: slope	Slight	Slight
21: SHAMBO-----	Slight	Slight	Moderate: slope	Slight	Slight
21B: SHAMBO-----	Slight	Slight	Moderate: slope	Slight	Slight
22: BELFIELD-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
DAGLUM-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
22B: BELFIELD-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
DAGLUM-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
23D: VEBAR-----	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: area reclaim slope thin layer
COHAGEN-----	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Slight	Severe: depth to rock

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Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
23E: VEBAR-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
COHAGEN-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock
24: GRASSNA-----	Slight	Slight	Moderate: slope	Slight	Slight
24B: GRASSNA-----	Slight	Slight	Moderate: slope	Slight	Slight
25B: FLAXTON-----	Slight	Slight	Moderate: slope	Slight	Slight
25C: FLAXTON-----	Slight	Slight	Severe: slope	Slight	Slight
25D: FLAXTON-----	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: slope
26B: KREM-----	Moderate: too sandy	Moderate: too sandy	Moderate: slope too sandy	Moderate: too sandy	Slight
26C: KREM-----	Moderate: too sandy	Moderate: too sandy	Severe: slope	Moderate: too sandy	Slight
28: GRAIL-----	Slight	Slight	Moderate: slope	Severe: erodes easily	Slight
29: HARRIET-----	Severe: flooding percs slowly wetness	Severe: excess sodium percs slowly wetness	Severe: percs slowly wetness	Severe: wetness	Severe: excess sodium wetness
31: PARNELL-----	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding
32B: LIHEN-----	Moderate: too sandy	Moderate: too sandy	Moderate: slope too sandy	Moderate: too sandy	Moderate: droughty
32C: LIHEN-----	Moderate: too sandy	Moderate: too sandy	Severe: slope	Moderate: too sandy	Moderate: droughty
33B: PARSHALL-----	Slight	Slight	Moderate: slope	Slight	Slight
LIHEN-----	Slight	Slight	Moderate: slope	Slight	Moderate: droughty

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Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
33C: PARSHALL-----	Slight	Slight	Severe: slope	Slight	Slight
LIHEN-----	Slight	Slight	Severe: slope	Slight	Moderate: droughty
35C: SUTLEY-----	Slight	Slight	Severe: slope	Slight	Slight
35E: SUTLEY-----	Severe: slope	Severe: slope	Severe: slope	Moderate: slope	Severe: slope
36B: BRYANT-----	Slight	Slight	Moderate: slope	Slight	Slight
36C: BRYANT-----	Slight	Slight	Severe: slope	Slight	Slight
40C: AMOR-----	Slight	Slight	Severe: slope	Slight	Moderate: area reclaim thin layer
CABBA-----	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Slight	Severe: depth to rock
40D: AMOR-----	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: area reclaim slope thin layer
CABBA-----	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Slight	Severe: depth to rock
41: REEDER-----	Slight	Slight	Moderate: area reclaim slope thin layer	Slight	Moderate: area reclaim thin layer
41B: REEDER-----	Slight	Slight	Moderate: area reclaim slope thin layer	Slight	Moderate: area reclaim thin layer
41C: REEDER-----	Slight	Slight	Severe: slope	Slight	Moderate: area reclaim thin layer
41D: REEDER-----	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: area reclaim slope thin layer

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Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
43D: REEDER-----	Moderate: slope	Moderate: slope	Severe: large stones slope	Slight	Moderate: large stones slope
44: DAGLUM-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
RHOADES-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
44C: DAGLUM-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium slope	Slight	Severe: excess sodium
RHOADES-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium slope	Slight	Severe: excess sodium
46B: REGENT-----	Slight	Slight	Moderate: slope	Severe: erodes easily	Moderate: thin layer
DAGLUM-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
46C: REGENT-----	Slight	Slight	Severe: slope	Severe: erodes easily	Moderate: thin layer
DAGLUM-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium slope	Slight	Severe: excess sodium
47B: MANNING-----	Slight	Slight	Moderate: slope	Slight	Moderate: droughty
49B: TELFER-----	Moderate: too sandy	Moderate: too sandy	Moderate: slope too sandy	Moderate: too sandy	Moderate: droughty
51B: NOONAN-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
53: BEARPAW-----	Slight	Slight	Moderate: slope	Slight	Slight
53B: BEARPAW-----	Slight	Slight	Moderate: slope	Slight	Slight
53C: BEARPAW-----	Slight	Slight	Severe: slope	Slight	Slight
54: REGENT-----	Slight	Slight	Moderate: slope	Severe: erodes easily	Moderate: thin layer

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Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
54B: REGENT-----	Slight	Slight	Moderate: slope	Severe: erodes easily	Moderate: thin layer
54C: REGENT-----	Slight	Slight	Severe: slope	Severe: erodes easily	Moderate: thin layer
54D: REGENT-----	Moderate: slope	Moderate: slope	Severe: slope	Severe: erodes easily	Moderate: slope thin layer
55C: RHOADES-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
58: BOWDLE-----	Slight	Slight	Moderate: slope	Slight	Slight
58B: BOWDLE-----	Slight	Slight	Moderate: slope	Slight	Slight
60B: FARLAND-----	Slight	Slight	Moderate: slope	Slight	Slight
62: AMOR-----	Slight	Slight	Moderate: area reclaim slope thin layer	Slight	Moderate: area reclaim thin layer
62B: AMOR-----	Slight	Slight	Moderate: area reclaim slope thin layer	Slight	Moderate: area reclaim thin layer
62C: AMOR-----	Slight	Slight	Severe: slope	Slight	Moderate: area reclaim thin layer
62D: AMOR-----	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: area reclaim slope thin layer
63D: WABEK-----	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: slope droughty
64: WILTON-----	Slight	Slight	Moderate: slope	Slight	Slight
64B: TEMVIK-----	Slight	Slight	Moderate: slope	Slight	Slight

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Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
64C: TEMVIK-----	Slight	Slight	Severe: slope	Slight	Slight
66C: SEROCO-----	Severe: too sandy	Severe: too sandy	Severe: too sandy	Severe: too sandy	Moderate: droughty
66E: SEROCO-----	Severe: slope too sandy	Severe: slope too sandy	Severe: slope too sandy	Severe: too sandy	Severe: slope
67B: VEBAR-----	Slight	Slight	Moderate: area reclaim slope thin layer	Slight	Moderate: area reclaim thin layer
67C: VEBAR-----	Slight	Slight	Severe: slope	Slight	Moderate: area reclaim thin layer
67D: VEBAR-----	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: area reclaim slope thin layer
70: WILLIAMS-----	Slight	Slight	Moderate: slope	Slight	Slight
BOWBELLS-----	Slight	Slight	Moderate: slope	Slight	Slight
70B: WILLIAMS-----	Slight	Slight	Moderate: slope	Slight	Slight
BOWBELLS-----	Slight	Slight	Moderate: slope	Slight	Slight
70C: WILLIAMS-----	Slight	Slight	Severe: slope	Slight	Slight
72: WILLIAMS-----	Slight	Slight	Moderate: slope	Slight	Slight
REEDER-----	Slight	Slight	Moderate: area reclaim slope thin layer	Slight	Moderate: area reclaim thin layer
72B: WILLIAMS-----	Slight	Slight	Moderate: slope	Slight	Slight
REEDER-----	Slight	Slight	Moderate: area reclaim slope thin layer	Slight	Moderate: area reclaim thin layer

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Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
72C: WILLIAMS-----	Slight	Slight	Severe: slope	Slight	Slight
REEDER-----	Slight	Slight	Severe: slope	Slight	Moderate: area reclaim thin layer
73C: WILLIAMS-----	Slight	Slight	Severe: slope	Slight	Slight
ZAHL-----	Slight	Slight	Severe: slope	Slight	Slight
73E: WILLIAMS-----	Severe: slope	Severe: slope	Severe: slope	Moderate: slope	Severe: slope
ZAHL-----	Severe: slope	Severe: slope	Severe: slope	Moderate: slope	Severe: slope
79D: TELFER-----	Moderate: slope too sandy	Moderate: slope too sandy	Severe: slope	Moderate: too sandy	Moderate: slope droughty
FLASHER-----	Severe: area reclaim thin layer	Severe: area reclaim thin layer	Severe: area reclaim slope thin layer	Slight	Severe: area reclaim thin layer
79E: FLASHER-----	Severe: area reclaim slope thin layer	Severe: area reclaim slope thin layer	Severe: area reclaim slope thin layer	Severe: slope	Severe: area reclaim slope thin layer
TELFER-----	Severe: slope	Severe: slope	Severe: slope	Moderate: slope too sandy	Severe: slope
82: ARVESON-----	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
84: HAVRELON-----	Severe: flooding	Moderate: wetness	Moderate: flooding wetness	Slight	Moderate: flooding
85: HAMERLY-----	Moderate: percs slowly wetness	Moderate: percs slowly wetness	Moderate: percs slowly slope wetness	Slight	Slight
88: LALLIE-----	Severe: flooding wetness	Severe: wetness	Severe: flooding wetness	Severe: wetness	Severe: flooding wetness
93B: EKALAKA-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium

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Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
98: BANKS-----	Severe: flooding	Moderate: flooding	Severe: flooding	Moderate: flooding	Severe: flooding
162: OMIO-----	Slight	Slight	Slight	Slight	Moderate: area reclaim thin layer
GRASSNA-----	Slight	Slight	Slight	Slight	Slight
162B: OMIO-----	Slight	Slight	Moderate: area reclaim slope thin layer	Slight	Moderate: area reclaim thin layer
AMOR-----	Slight	Slight	Moderate: area reclaim slope thin layer	Slight	Moderate: area reclaim thin layer
162C: OMIO-----	Slight	Slight	Severe: slope	Slight	Moderate: area reclaim thin layer
AMOR-----	Slight	Slight	Severe: slope	Slight	Moderate: area reclaim thin layer
164: WILLIAMS-----	Slight	Slight	Moderate: slope	Slight	Slight
FALKIRK-----	Slight	Slight	Moderate: slope	Slight	Slight
164B: WILLIAMS-----	Slight	Slight	Moderate: slope	Slight	Slight
FALKIRK-----	Slight	Slight	Moderate: slope	Slight	Slight
W: WATER-----	---	---	---	---	---

